Critical Management Strategies for Johne's Control

Manage Manure

"all manure is guilty"

1. Reduce newborn's exposure to M. Paratuberculosis at calving; calfs should be born in a clean, dry area used only for calving.

2. Provide clean feed for young stock (preferably to 24 months); avoid weighbacks.

3. Provide clean water for young stock (preferably to 24 months); supply adequate clean water, uncontaminated with manure.

4. Keep young stock separate from adults and their manure; raise young stock in separate facilities or areas separate from adults and manure.

Manage Colostrum and Milk

5. Feed "low-risk" colostrum, from healthy low-risk cows, preferably low-risk on recent test(s).

6. Feed "low-risk" milk, use milk replacer, pasteurized milk, or from healthy low-risk cows, preferably low-risk on recent test(s).

Manage Known Infectious Animals

7. Identify, quickly remove clinical, late-stage infected animals from the herd; watch for, confirm diagnosis, segregate and cull suspect or high-risk animals.

8. Test to manage subclinical infectious animals and monitor herd status; develop a test strategy and decision plan for high- and low-risk animals based on results; coordinate testing so results are available at critical decision times such as dry off, calving, breeding, turn-out to pasture.

9. "Buyer beware" when adding animals to herd; know the risk in the home herd and investigate the risk in the source for infectious diseases, such as Johne's, BVD, Strep ag, Staph aureus, Mycoplasma mastitis, infectious foot diseases, Salmonella, Neospora.

10. Farmer/Producer, veterinarian and employees develop a Johne's plan integrated with farm's business, performance and health goals.

For more information please contact:

Veterinary Services
Safeguarding Animal Health

US Department of Agriculture
Animal & Plant Health
Inspection Services
Veterinary Services
160 Worcester Providence Rd.
Sutton, Massachusetts 01590

Phone: 508/865-1421 Fax: 508/865-9317

www.aphis.usda.gov/vs

or

MDAR Est. 1852
Massachusetts Department of Agricultural Resources

MA Agricultural Resources
Animal Health, Biosecurity
& Dairy Services
251 Causeway Street
Boston, Massachusetts, 02114

Phone: 617/626-1795 Fax: 617/626-1850

www.mass.gov/agr

Massachusetts Cattle Health Improvement Program

MACHIP

A Cooperative Voluntary Bovine Johne's Disease Control Program

MACHIP Module One

Assess Bovine Disease

Develop Farm-Specific Management Strategies

Increase Herd's Health, Productivity and Profitability

Johne's Disease in Cattle

Johne's disease is a chronic, incurable bacterial infection that primarily affects the lower small intestine of ruminants, although the pathology and symptoms vary among species.

Infection most commonly occurs when young animals ingest the bacteria Mycobacterium avium paratuberculosis (Map). After infection, the bacteria grow slowly inside the animal's intestinal cells. Over time, the animal's immune cells multiply in response to the bacteria's presence, eventually leading to thickening of the intestine, impairing ability to absorb nutrients and clinical signs of Johne's disease in some animals.

Clinical signs of Johne's disease are delayed because of a two-to-six year or more incubation period. Signs of late-stage infection include weight loss, intermittent or sudden unresponsive diarrhea, but a normal appetite. Some animals are unthrifty or develop bottle jaw - fluid under the jaw caused by protein loss. Late stage animals continue to deteriorate and can die in a few days or a few months.

Johne's Disease Costs You MONEY

A national study of US dairies, Dairy NAHMS 96, found that approximately 22 percent of US dairy farms have at least 10% of the herd infected with Johne's disease. The study determined that infected herds experience an average loss of $75 per cow annually. Small herds (<50 cows) lost an average of $178 per cow, while large herds (>500 cows) lost $181 per cow. This loss was due to reduced milk production, early culling and poor conditioning at culling.

Farm specific plans can be implemented to reduce economic losses and cleanup Johne's disease from the farm.

MACHIP Key Points

- MACHIIP is a voluntary program for the dairy farmer/producer provided by the MA Department of Agricultural Resources with the cooperation of USDA/APHIS/VS.
- There is no enrollment fee for this program.
- Johne's certified herd veterinarians are compensated for their time in the planning process by MDAR
- Herd Plans are herd specific.
- Herd plans will be created within the goals and resources of the operation. Some plans will incorporate just changes in management practices while others may include disease testing or construction of facilities.
- Contact MDAR or USDA/APHIS/VS to enroll in MACHIP.

Additional material provided by the New York State Cattle Health Assurance Plan.

The MA Cattle Health Improvement Program

The Massachusetts Voluntary Bovine Johne's Disease Control Program is the initial module of the Massachusetts Cattle Health Improvement Program (MACHIP), with the objective of engaging the veterinarian and farmer/producer in a process of evaluating and developing management strategies to address herd health. MACHIP's Johne's Control Program consists of three basic components: education, management and herd status.

The Education Component provides farmers/producers an opportunity to understand and explore their risk for Johne's Disease in the context of their own operation. The educational focus conveys basic Johne's disease risk information, management strategies for controlling and eliminating disease, and introduces the program standards.

The Management Component is a commitment from the farmer/producer, with either an infected herd and herd of unknown status, to participate in a control/prevention program. Participation requires the farmer/producer committing to an approved management strategy under a joint agreement with a Johne's certified veterinarian and the MA Department of Agricultural Resources.

The Herd Status Component provides farmers/producers the ability to establish an officially recognized test-negative, low-risk status by successfully completing required testing protocols and adoption of best management practices.